

DEPARTMENT OF THE NAVY
Southwest Regional Maintenance Center

3755 Brisner St. Suite 4
SAN DIEGO, CALIFORNIA 92136-5205



ASSAULT CRAFT UNIT ONE (ACU-1)

SPECIFICATIONS FOR WORK TO BE ACCOMPLISHED

SPECIFICATION NUMBER: SSP:SSSD-081-08

SHIP CHARACTERISTICS

LENGTH OVERALL	0 FEET 0 INCHES
MAX. BEAM AT DESIGN WATERLINE	0 FEET 0 INCHES
EXTREME BEAM INCLUDING APPENDAGES	0 FEET 0 INCHES
DRAFT (MAX. NAVIGABLE) (FWD.)	0 FEET 0 INCHES
DRAFT (MAX. NAVIGABLE) (AFT.)	0 FEET 0 INCHES
LIGHT DISPLACEMENT	0 LONG TON
FULL LOAD DISPLACEMENT	0 LONG TON
HEIGHT OF MAST ABOVE DESIGN WATERLINE	0 FEET 0 INCHES

DETROIT DIESEL REPAIR

NO CS DATE

DATE PREPARED

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ITEMS THAT ARE STRUCK OUT ON THIS INDEX DO NOT APPLY TO THIS CONTRACT.

CATEGORY I. FY-09 STANDARD ITEMS APPLICABLE TO THIS JOB ORDER WITHOUT FURTHER REFERENCE

<u>ITEM NO.</u>	<u>TITLE</u>	<u>DATE</u>
009-01	General Criteria; accomplish	19-JUL-07
009-02	Environmental Compliance Reports for Material Usage at Naval Facilities; provide	19-JUL-07
009-03	Toxic and Hazardous Substances; control	01-APR-08
009-04	Quality Management System; provide	19-JUL-07
009-05	Temporary Accesses; provide	19-JUL-07
009-06	Maintaining Protection and Cleanliness from Non-Radioactive Contaminate-Producing Operations; accomplish	19-JUL-07
009-07	Confined Space Entry, Certification, Fire Prevention and Housekeeping; accomplish	19-JUL-07
009-08	Fire Protection at Contractor's Facility; accomplish	19-JUL-07
009-10	Shipboard Asbestos-Containing Material (ACM); control	19-JUL-07
009-18	Magnetic Material; control	19-JUL-07
009-19	Provisioning Technical Documentation (PTD); provide	19-JUL-07
009-20	Government Property; control	19-JUL-07
009-21	Logistics and Technical Data; provide	19-JUL-07
009-23	Interferences; remove and install	19-JUL-07
009-24	Authorization, Control, Isolation, Blanking, and Tagging Requirements; accomplish	01-APR-08
009-29	Asbestos-Free Pipe Hanger Liner Material; install	29-JUL-04
009-34	Fire Protection of Unmanned Craft at Contractor's Facility; provide	19-JUL-07
009-35	Confined Space Entry, Certification, Fire Prevention Utilizing Military Fire Watches, and Housekeeping; accomplish	19-JUL-07

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009-39	Technical Manual Contract Requirement (TMCR) for New Technical Manuals for Commercial Equipment/ Component; provide	19-JUL-07
009-40	Requirements for Contractor Cranes at Naval Facilities; accomplish	19-JUL-07
009-59	Organotin Antifouling Material; control	29-JUL-04
009-60	Schedule and Associated Reports; provide and manage	19-JUL-07
009-61	Shipboard Use of Fluorocarbons; control	19-JUL-07
009-64	Synthetic Fire-Resistant Hydraulic Fluid; control	19-JUL-07
009-65	Polychlorinated Biphenyls (PCBs); control	19-JUL-07
009-67	Integrated Total Ship Testing; manage	19-JUL-07
009-69	Heavy Weather Plan; provide	19-JUL-07
009-70	Confined Space Entry, Certification, Fire Prevention and Housekeeping for Unmanned Craft; accomplish	19-JUL-07
009-72	Physical Security of U.S. Naval Vessels and Crews at Private Contractor's Facility; accomplish	19-JUL-07
009-73	Shipboard Electrical/Electronic/Fiber Optic Cable; remove, relocate, repair, and install	19-JUL-07
009-77	Cofferdam Requirements; accomplish	19-JUL-07
009-79	Government Owned Material (GOM); status reporting	19-JUL-07
009-80	Ship's Facilities; provide	19-JUL-07
009-81	Compartment Closeout Schedule; provide	19-JUL-07
009-82	Data Requirements When Installing an Equal Component Vice Specified Component; provide	19-JUL-07
009-83	Wire Rope Fitting Verification; provide	19-JUL-07
009-84	Accountability of Temporary Fasteners; provide	19-JUL-07
009-86	Recovery of Chlorofluorocarbon (CFC) Refrigerants and Fire Suppressant Halon (H) Materials; accomplish	29-AUG-03

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009-87	Chlorination Procedures; accomplish	19-JUL-07
009-88	Collection, Holding and Transfer (CHT) and Mogas Tanks, Spaces, and Piping, including Sewage or Mogas-Contaminated Tanks, Spaces, and Piping; certify	01-APR-08
009-89	Purchase and Inspection Requirements for Contractor Furnished Zinc Anodes; accomplish	19-JUL-07
009-93	Emergency Planning and Community Right-to-Know Act (EPCRA) and Pollution Prevention Act (PPA) Information; provide	19-JUL-07
009-94	General Environmental Requirements for Work at Contractor's Facility; accomplish	19-JUL-07
009-95	Mechanically Attached Fittings (MAF's) for Piping Systems; install	19-JUL-07
009-97	Shipbuilding and Ship Repair Operations National Emission Standard for Hazardous Air Pollutants (NESHAPS) for Surface Coating Information; provide	19-JUL-07
009-99	Ship Departure Report; provide	19-JUL-07
009-100	Ship's Stability Process Control Procedure (PCP); maintain	19-JUL-07
009-101	Requirements for Mooring, Entry to and Departure from Contractor's Facility; accomplish	19-JUL-07
009-102	Alteration Verification; provide	19-JUL-07
009-103	Weight and Moment Change Data; provide	19-JUL-07
009-106	Work Authorization Form Coordinator (WAFCOR); provide	19-JUL-07
009-108	Aircraft Carrier Requirements for Mooring, Entry to, Movement within, and Departure from Contractor's Facility; accomplish	19-JUL-07
009-109	Special Requirements for Non-SUBSAFE Work on SUBSAFE-Certified Vessels; accomplish	19-JUL-07
009-110	Special Requirements for Non-Nuclear Work on Nuclear Vessels; accomplish	19-JUL-07

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CATEGORY II. FY-09 STANDARD ITEMS WHICH MAY BE INVOKED IN THE WORK ITEMS OF THIS JOB ORDER

<u>ITEM NO.</u>	<u>TITLE</u>	<u>DATE</u>
009-09	Process Control Procedure (PCP); provide and accomplish	19-JUL-07
009-11	Insulation and Lagging Requirements; accomplish	19-JUL-07
009-12	Welding, Fabrication, and Inspection Requirements; accomplish	19-JUL-07
009-13	Meter; repair and calibrate	19-JUL-07
009-14	Gages and Thermometers; repair and calibrate	19-JUL-07
009-15	Rotating Machinery; balance	19-JUL-07
009-16	Electronic Equipment; repair	19-JUL-07
009-17	Rotating Electrical Equipment; repair	19-JUL-07
009-22	Shipboard Electric Cable; test	19-JUL-07
009-25	Structural Boundary Test; accomplish	19-JUL-07
009-26	Deck Covering Requirements; accomplish	19-JUL-07
009-27	Material Identification and Control (MIC) for Level I Systems; accomplish	19-JUL-07
009-28	Metal-Sprayed Coating System for Corrosion Protection; accomplish	14-JUL-05
009-30	Boiler Sample Tubes; inspect	19-JUL-07
009-31	Boiler Waterjet Cleaning; accomplish	19-JUL-07
009-32	Cleaning and Painting Requirements; accomplish	01-APR-08
009-33	Rotating Electrical Equipment; rewind	19-JUL-07
009-36	Controller; repair	19-JUL-07
009-37	General Procedures for Woodwork; accomplish	13-JUL-06

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009-38	Boiler Dry Lay-up; accomplish	19-JUL-07
009-41	Technical Manual Contract Requirement (TMCR) for a Topically Structured Technical Manual; provide	19-JUL-07
009-42	Technical Manual Contract Requirement (TMCR) for Updating Technical Manuals; provide	19-JUL-07
009-43	Light-Off Assessment (LOA) Support for Steam Propulsion System; provide	19-JUL-07
009-44	Light-Off Assessment (LOA) Support for Gas Turbine Propulsion System; provide	19-JUL-07
009-45	Tapered Plug Valve; repair	19-JUL-07
009-46	Butterfly Valve, Synthetic and Metal Seated; repair	19-JUL-07
009-47	Gate Valve; repair	19-JUL-07
009-48	Pressure Seal Bonnet Valve; repair (shop)	19-JUL-07
009-49	Pressure Seal Bonnet Valve; repair (in-line)	19-JUL-07
009-50	Horizontal Swing Check Valve; repair	19-JUL-07
009-51	Globe, Globe Angle, and Globe Stop Check Valve; repair	19-JUL-07
009-52	Relief Valve; repair	19-JUL-07
009-53	Bolted Bonnet Steam Valve; repair (shop)	19-JUL-07
009-54	Bolted Bonnet Steam Valve; repair (in-line)	19-JUL-07
009-55	Regulating/Reducing Valve; repair	19-JUL-07
009-56	Boiler Wet Lay-Up; accomplish	19-JUL-07
009-57	Reduction Gear Security Requirements; accomplish	19-JUL-07
009-58	Pump and Driver Shaft Alignment; accomplish	19-JUL-07
009-62	Boiler Handhole and Manhole Seats and Plates; inspect	19-JUL-07
009-63	Lubricating Oils and Hydraulic Fluids; analyze	19-JUL-07

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009-66	Light-Off Assessment (LOA) Support for Diesel Propulsion System; provide	19-JUL-07
009-68	Bolted Bonnet Valve; repair	19-JUL-07
009-71	Testing Requirements for Piping Systems; accomplish	19-JUL-07
009-75	Circuit Breaker; repair	19-JUL-07
009-76	Waveguide and Transmission Line Temporary Lay-Up, Pressurization, and Purging; accomplish	19-JUL-07
009-78	Passive Countermeasures System (PCMS) Material Repair/Installation Requirements; accomplish	19-JUL-07
009-85	Government Sponsored Planning Yard/Configuration Data Manager (CDM) On-Site Representative Facility; provide	19-JUL-07
009-90	Technical Representative; provide	19-JUL-07
009-91	Propeller In-Place Inspection; accomplish	19-JUL-07
009-92	Resilient Mount; remove and install	19-JUL-07
009-96	Ball Valve; repair	19-JUL-07
009-98	Monel Fasteners; inspect	19-JUL-07
009-104	Vibration Testing and Analysis; accomplish	19-JUL-07
009-105	Thermal Sprayed Coatings for Machinery Component Repair; accomplish	14-JUL-05
009-107	Piping System Cleanliness (Non-Nuclear); accomplish	19-JUL-07

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<u>ITEM NO.</u>	<u>TITLE</u>
231-00-001	Propulsion Diesel Engine Parts; provide
233-11-001	12V-71 Main Propulsion Diesel Engine; overhaul
233-11-002	8V-71TI Main Propulsion Diesel Engine; overhaul
233-11-003	3-71 Ships Service Diesel Engine; overhaul
233-11-004	4-71 Anchor Diesel Engine; overhaul

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1) ITEM NO: 231-00-001
COAR: 28-081 PCN: SSSD-0116
CMP: NONE
PLANNER: KELLY

1. SCOPE:

1.1 Title: Propulsion Diesel Engine Parts; provide

1.2 Location of Work:

1.2.1 Not applicable

1.3 Identification:

1.3.1 Diesel Engine, Mfr.: Detroit Diesel-Allison of GMC, Mfr.: ID:
12V-71, Advanced Time, N-70 Injection

1.3.2 Diesel Engine, Mfr.: Detroit Diesel-Allison of GMC, Mfr.: ID:
8V-71 TI

1.3.3 Diesel Engine, Mfr.: Detroit Diesel-Allison of GMC, Mfr.: ID:
4-71 Inline

1.3.4 Diesel Engine, Mfr.: Detroit Diesel-Allison of GMC, Mfr.: ID:
3-71 Inline

2. REFERENCES:

2.1 Standard Items

3. REQUIREMENTS:

3.1 Accomplish the following when directed by the SUPERVISOR for each equipment identified in 1.3.

3.1.1 Provide the following new or refurbished OEM parts for equipment identified in 1.3.1;

3.1.1.1 One each engine block.

3.1.1.2 One each engine head.

3.1.1.3 One each engine cam shaft.

3.1.1.4 One each engine crank shaft.

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3.1.2 Provide the following new or refurbished OEM parts for equipment identified in 1.3.2;

3.1.2.1 One each engine block.

3.1.2.2 One each engine head.

3.1.2.3 One each engine cam shaft.

3.1.2.4 One each engine crank shaft.

3.1.3 Provide the following new or refurbished OEM parts for equipment identified in 1.3.3;

3.1.3.1 One each engine block.

3.1.3.2 One each engine head.

3.1.3.3 One each engine cam shaft.

3.1.3.4 One each engine crank shaft.

3.1.4 Provide the following new or refurbished OEM parts for equipment identified in 1.3.4;

3.1.4.1 One each engine block.

3.1.4.2 One each engine head.

3.1.4.3 One each engine cam shaft.

3.1.4.4 One each engine crank shaft.

4. NOTES:

4.1 None.

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

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1. None.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1) ITEM NO: 233-11-001
COAR: 28-081 PCN: SSSD-0109
CMP: NONE
PLANNER: KELLY

1. SCOPE:

1.1 Title: 12V-71 Main Propulsion Diesel Engine; overhaul

1.2 Location of Work:

1.2.1 Not Applicable

1.3 Identification:

1.3.1 Quantity (One), Diesel Engine, Model 12V-71 (71227001), Detroit Diesel Corporation, APL 666010154 (Advanced Timed)(N70 Fuel Injectors)(4 Valve Head)

2. REFERENCES:

2.1 Standard Items

2.2 Detroit Diesel V-71 Service Manual

2.3 S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships.

2.4 SUPSHIP San Diego Reference 276; Cleaning Procedures dated 18 April 1988

2.5 GM Diesel Parts Book for V-71 Engines

2.6 T9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods

2.7 MIL-STD-2035; Non-Destructive Testing Acceptance Criteria

2.8 S9086-HB-STM-000/CH-233; NSTM, Diesel Engines

2.9 S6430-AE-TED-010, Technical Directive for Piping Devices, Flexible Hose Assemblies

3. REQUIREMENTS:

3.1 Pick up each equipment identified in 1.3.1.

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3.1.1 Remove and dispose of fluids to accomplish requirements of this work item.

3.2 Disassemble each equipment identified in 1.3.1, in accordance with 2.2.

3.2.1 Submit one legible copy, in hard copy or electronic media, within 48 hours after removal of equipment of a report listing missing parts including part number, price and, availability required for a class "B" overhaul of equipment identified in 1.3.1 to the SUPERVISOR using 2.2 for guidance.

3.3 Chemically and mechanically clean each part free of contamination, using 2.4 for guidance.

3.4 Inspect each part for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.5 Measure and record sizes and clearances of each wearing part and fit area, using 2.2 for guidance.

3.6 Submit one legible copy, in hard copy or electronic media of a report, listing results of the requirements of 3.4 and 3.5 to the SUPERVISOR.

3.7 Accomplish class "B" overhaul as defined in Paragraph 042c of 2.3 for each engine identified in paragraph 1.3.1 using 2.2 for guidance.

3.7.1 Machine cut and handwork each machined, sealing, aligning, mating and gasket surface, taking precaution to ensure no excessive material is removed causing loss of critical size or alignment.

3.7.2 Chase and tap exposed threaded areas.

3.7.3 Repair each cylinder block using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.3.1 Pressure test each cylinder block at 40 PSIG, using 2.2 for guidance.

3.7.3.2 Hone each cylinder block bore using 2.2 for guidance.

3.7.3.3 Install each cylinder block end plate, fit and install new each gasket and fastener using 2.2 for guidance.

3.7.4 Repair each cylinder head using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.4.1 Pressure Test each cylinder head at 40 PSIG using 2.2 for guidance.

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(I)(G) "NEW PARTS"

3.7.4.2 Remove existing install new each "J" type exhaust valve, spring and gasket using 2.2 and 2.5 for guidance.

3.7.4.3 Install new each threaded fastener, gasket, O-ring, oil seal, pipe plug, washer and fuel pipe.

3.7.5 Repair each crankshaft using 2.2 for guidance.

(I)(G) "MAGNETIC PARTICLE TEST "

3.7.5.1 Accomplish magnetic particle tests on each crankshaft using 2.6 for guidance. The accept or reject criteria shall be in accordance with Section 6 of 2.7.

3.7.5.2 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.1 to the SUPERVISOR.

3.7.5.3 Inspect each crankshaft for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.5.4 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.3 to the SUPERVISOR.

3.7.6 Inspect each connecting rod for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.6.1 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.6 to the SUPERVISOR.

3.7.7 Repair each blower using 2.2 for guidance.

3.7.7.1 Repair scratches, grooves, nicks, burrs and pits.

(I)(G) "BALANCE"

3.7.7.2 Accomplish the requirements of 009-15 of 2.1 for each rotating assembly.

3.7.7.3 Install new each gasket and threaded fastener.

3.7.7.4 Submit one legible copy, in hard copy or electronic media, of each final clearance reading using 2.2 through 2.6 for guidance to the SUPERVISOR.

3.7.8 Disassemble each lubricating oil cooler, using 2.2 for guidance.

3.7.8.1 Chemically and mechanically clean each lube oil cooler

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in accordance with Chapters 4, 5, and 18 of 2.4.

(I)(G) "HYDROSTATIC TEST"

3.7.8.2 Hydrostatically test each lube oil cooler at 75 PSIG in accordance with Section 4.4 of 2.2.

3.7.8.3 Repair 10 leaks in each lube oil cooler.

3.7.9 Assemble each lube oil cooler, fit and install new fasteners, gaskets, plugs, washers and lockwashers using 2.2 for guidance.

(I)(G) "HYDROSTATIC TEST"

3.7.9.1 Hydrostatically test each lube oil cooler using clean fresh water at 75 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10 Disassemble each fresh water heat exchanger, using 2.2 for guidance.

3.7.10.1 Chemically and mechanically clean each fresh water heat exchanger in accordance with Chapters 4, 5, and 18 of 2.4.

(I)(G) "HYDROSTATIC TEST"

3.7.10.2 Hydrostatically test each fresh water heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10.3 Repair 4 each leaking tubes by soldering both ends of the tube closed.

(I)(G) "HYDROSTATIC TEST"

3.7.10.4 Hydrostatically test each freshwater heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

(I)(G) "NEW PARTS"

3.7.11 Assemble each fresh water heat exchanger, fit and install new each fastener, gasket, seal and plug, using 2.2 and 2.5 for guidance.

3.7.12 Deliver each governor to a qualified governor repair facility.

3.7.12.1 Repair, set, adjust and calibrate each governor using 2.2 for guidance.

3.7.13 Repair each fuel oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.13.1 Fit and install new each fastener, gasket, seal,

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spring, pin bushing and plug using 2.2 and 2.5 for guidance.

3.7.14 Repair each lube oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.14.1 Fit and install new each gasket, seal, key, pin, washer and fastener.

3.7.15 Repair each fresh water pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.15.1 Assemble each fresh water pump, fit and install new each fastener, seal, gasket, slinger, O-ring and bearing using 2.2 and 2.5 for guidance.

(I)(G) "NEW PARTS"

3.8 Assemble each diesel engine and repaired engine component. Fit, and install new the following Original Equipment Manufacturer parts in each equipment listed in 1.3 using 2.2 and 2.5 for guidance:

TOTAL QUANTITY REQUIRED PER UNIT	NAME OF PART
One	Gasket Kit
One	Seal Crankshaft, Front
One	Slinger
One	Seal Crankshaft, Rear
14	Main Bearing Shell Set
4	Thrust Washer
12	Connect Rod Bearing
12	Shell Set
12	Piston Ring Set
12	Liner Cylinder
12	Insert Cylinder Liner
12	Camshaft Bearing
4	Thrust Washer
14	Bearing Set, Camshaft
One	Air Pressure Regulator
One	Oil Pressure Regulator

3.8.1 Fit and install new each fastener, plug, washer, lockwasher, seal, dowel, pin, key, retainer ring, spacer, spring, O-ring, clamp, shim, bushing, lube oil filter element, air filter element, and fuel oil filter element conforming to the Material List of 2.5.

3.8.1.1 Submit one legible copy, in hard copy or electronic media, of certification that each Fuel Injector Assembly meets manufacturer's calibration and performance standards to the SUPERVISOR.

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(I)(G) "HYDROSTATIC TEST"

3.9 Hydrostatically test each engine fresh water system using clean fresh water at 10 PSIG using clean fresh water for a minimum of 30 minutes. Allowable leakage: None.

3.10 Accomplish crankshaft pulley end play and crankshaft distortion measurements using 2.2 for guidance.

3.10.1 Submit one legible copy, in hard copy or electronic media, of requirements of 3.10 to the SUPERVISOR.

3.11 Accomplish blower readings for each blower; rotor to end plate (gear end), rotor to end plate, leading edge of RH rotor to trailing edge of LH rotor, trailing edge of RH rotor to trailing edge of LH rotor and rotors to case inlet side.

3.11.1 Submit one legible copy, in hard copy or electronic media, of requirements of 3.11 to the SUPERVISOR.

3.12 Fill each engine to the full mark with new lube oil conforming Mil-L-9000, symbol 9250.

(I)(G) "DYNAMOMETER TEST"

3.13 Accomplish Dynamometer Test for each engine listed in 1.3.1 using 2.2 for guidance.

3.13.1 Perform start up and Main Propulsion Run in Schedule using 2.8 for guidance.

3.13.1.1 Submit one legible copy, in hard copy or electronic media, of a report listing results of the requirements of 3.12 and 3.12.1 to the SUPERVISOR.

3.13.1.2 Securely attach a report with the following information in a waterproof envelope; command, manufacturer's model number, manufacturer's serial number, date of rebuild and date of delivery, size of piston and liner installed by cylinder and one each hard copy of required reports 3.10.1, 3.11.1 and 3.12.1.1.

3.14 Fill each engine to the full mark with new lube oil conforming to Mil-L-9000, symbol 9250.

3.15 Install new each cooling water, fuel and hydraulic hose using 2.2 and 2.9 for guidance.

3.16 Accomplish the requirements of 009-32 of 2.1 for each engine.

3.17 Deliver each engine disassembled in paragraph 3.2 via the SUPERVISOR.

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4. NOTES:

4.1 None

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.

SHIP:	<u>ASSAULT CRAFT UNIT ONE (ACU-1)</u>	ITEM NO:	<u>233-11-002</u>
COAR:	<u>28-081</u>	PCN:	<u>SSSD-0110</u>
		CMP:	<u>NONE</u>
		PLANNER:	<u>KELLY</u>

1. SCOPE :

1.1 Title: 8V-71TI Main Propulsion Diesel Engine; overhaul

1.2 Location of Work:

1.2.1 Not Applicable

1.3 Identification:

1.3.1 Quantity (One), Diesel Engine, Model 8V-71TI, Detroit Diesel Corporation

2. REFERENCES:

2.1 Standard Items

2.2 Detroit Diesel V-71 Service Manual

2.3 S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships.

2.4 SUPSHIP San Diego Reference 276; Cleaning Procedures dated 18 April 1988

2.5 GM Diesel Parts Book for V-71 Engines

2.6 T9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods

2.7 MIL-STD-2035; Non-Destructive Testing Acceptance Criteria

2.8 S9086-HB-STM-000/CH-233; NSTM, Diesel Engines

2.9 S6430-AE-TED-010, Technical Directive for Piping Devices, Flexible
Hose Assemblies

3. REQUIREMENTS :

3.1 Pick up each equipment identified in 1.3.1.

3.1.1 Remove and dispose of fluids to accomplish requirements of this

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work item.

3.2 Disassemble each equipment identified in 1.3.1, in accordance with 2.2.

3.2.1 Submit one legible copy, in hard copy or electronic media, within 48 hours after removal of equipment of a report listing missing parts including part number, price and, availability required for a class "B" overhaul of equipment identified in 1.3.1 to the SUPERVISOR using 2.2 for guidance.

3.3 Chemically and mechanically clean each part free of contamination, using 2.4 for guidance.

3.4 Inspect each part for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.5 Measure and record sizes and clearances of each wearing part and fit area, using 2.2 for guidance.

3.6 Submit one legible copy, in hard copy or electronic media of a report, listing results of the requirements of 3.4 and 3.5 to the SUPERVISOR.

3.7 Accomplish class "B" overhaul as defined in Paragraph 042c of 2.3 for each engine identified in paragraph 1.3.1 using 2.2 for guidance.

3.7.1 Machine cut and handwork each machined, sealing, aligning, mating and gasket surface, taking precaution to ensure no excessive material is removed causing loss of critical size or alignment.

3.7.2 Chase and tap exposed threaded areas.

3.7.3 Repair each cylinder block using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.3.1 Pressure test each cylinder block at 40 PSIG, using 2.2 for guidance.

3.7.3.2 Hone each cylinder block bore using 2.2 for guidance.

3.7.3.3 Install each cylinder block end plate, fit and install new each gasket and fastener using 2.2 for guidance.

3.7.4 Repair each cylinder head using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.4.1 Pressure Test each cylinder head at 40 PSIG using 2.2 for guidance.

(I)(G) "NEW PARTS"

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.4.2 Remove existing install new each "J" type exhaust valve, spring and gasket using 2.2 and 2.5 for guidance.

3.7.4.3 Install new each threaded fastener, gasket, O-ring, oil seal, pipe plug, washer and fuel pipe.

3.7.5 Repair each crankshaft using 2.2 for guidance.

(I)(G) "MAGNETIC PARTICLE TEST "

3.7.5.1 Accomplish magnetic particle tests on each crankshaft using 2.6 for guidance. The accept or reject criteria shall be in accordance with Section 6 of 2.7.

3.7.5.2 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.1 to the SUPERVISOR.

3.7.5.3 Inspect each crankshaft for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.5.4 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.3 to the SUPERVISOR.

3.7.6 Inspect each connecting rod for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.6.1 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.6 to the SUPERVISOR.

3.7.7 Repair each blower using 2.2 for guidance.

3.7.7.1 Repair scratches, grooves, nicks, burrs and pits.

(I)(G) "BALANCE"

3.7.7.2 Accomplish the requirements of 009-15 of 2.1 for each rotating assembly.

3.7.7.3 Install new each gasket and threaded fastener.

3.7.7.4 Submit one legible copy, in hard copy or electronic media, of each final clearance reading using 2.2 through 2.6 for guidance to the SUPERVISOR.

3.7.8 Disassemble each lubricating oil cooler, using 2.2 for guidance.

3.7.8.1 Chemically and mechanically clean each lube oil cooler in accordance with Chapters 4, 5, and 18 of 2.4.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

(I)(G) "HYDROSTATIC TEST"

3.7.8.2 Hydrostatically test each lube oil cooler at 75 PSIG in accordance with Section 4.4 of 2.2.

3.7.8.3 Repair 10 leaks in each lube oil cooler.

3.7.9 Assemble each lube oil cooler, fit and install new fasteners, gaskets, plugs, washers and lockwashers using 2.2 for guidance.

(I)(G) "HYDROSTATIC TEST"

3.7.9.1 Hydrostatically test each lube oil cooler using clean fresh water at 75 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10 Disassemble each fresh water heat exchanger, using 2.2 for guidance.

3.7.10.1 Chemically and mechanically clean each fresh water heat exchanger in accordance with Chapters 4, 5, and 18 of 2.4.

(I)(G) "HYDROSTATIC TEST"

3.7.10.2 Hydrostatically test each fresh water heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10.3 Repair 4 each leaking tubes by soldering both ends of the tube closed.

(I)(G) "HYDROSTATIC TEST"

3.7.10.4 Hydrostatically test each freshwater heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

(I)(G) "NEW PARTS"

3.7.11 Assemble each fresh water heat exchanger, fit and install new each fastener, gasket, seal and plug, using 2.2 and 2.5 for guidance.

3.7.12 Deliver each governor to a qualified governor repair facility.

3.7.12.1 Repair, set, adjust and calibrate each governor using 2.2 for guidance.

3.7.13 Repair each fuel oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.13.1 Fit and install new each fastener, gasket, seal, spring, pin bushing and plug using 2.2 and 2.5 for guidance.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.14 Repair each lube oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.14.1 Fit and install new each gasket, seal, key, pin, washer and fastener.

3.7.15 Repair each fresh water pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.15.1 Assemble each fresh water pump, fit and install new each fastener, seal, gasket, slinger, O-ring and bearing using 2.2 and 2.5 for guidance.

(I)(G) "NEW PARTS"

3.8 Assemble each diesel engine and repaired engine component. Fit, and install new the following Original Equipment Manufacturer parts in each equipment listed in 1.3 using 2.2 and 2.5 for guidance:

TOTAL QUANTITY REQUIRED PER UNIT	NAME OF PART
One	Gasket Kit
One	Seal Crankshaft, Front
One	Slinger
One	Seal Crankshaft, Rear
10	Main Bearing Shell Set
4	Thrust Washer
8	Connect Rod Bearing
8	Shell Set
8	Piston Ring Set
8	Liner Cylinder
8	Insert Cylinder Liner
8	Camshaft Bearing
4	Thrust Washer
10	Bearing Set, Camshaft
One	Air Pressure Regulator
One	Oil Pressure Regulator

3.8.1 Fit and install new each fastener, plug, washer, lockwasher, seal, dowel, pin, key, retainer ring, spacer, spring, O-ring, clamp, shim, bushing, lube oil filter element, air filter element, and fuel oil filter element conforming to the Material List of 2.5.

3.8.1.1 Submit one legible copy, in hard copy or electronic media, of certification that each Fuel Injector Assembly meets manufacturer's calibration and performance standards to the SUPERVISOR.

(I)(G) "HYDROSTATIC TEST"

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.9 Hydrostatically test each engine fresh water system using clean fresh water at 10 PSIG using clean fresh water for a minimum of 30 minutes. Allowable leakage: None.

3.10 Accomplish crankshaft pulley end play thrust measurements using 2.2 for guidance.

3.10.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.10 to the SUPERVISOR.

3.11 Accomplish blower readings for each blower; rotor to end plate (gear end), rotor to end plate, leading edge of RH rotor to trailing edge of LH rotor, trailing edge of RH rotor to trailing edge of LH rotor and rotors to case inlet side.

3.11.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.11 to the SUPERVISOR.

3.12 Fill each engine to the full mark with new lube oil conforming Mil-L-9000, symbol 9250.

(I)(G) "DYNAMOMETER TEST"

3.13 Accomplish Dynamometer Test for each engine listed in 1.3.1 using 2.2 for guidance.

3.13.1 Perform start up and Main Propulsion Run in Schedule using 2.8 for guidance.

3.13.1.1 Submit one legible copy, in hard copy or electronic media, of a report listing results of the requirements of 3.12 and 3.12.1.1 to the SUPERVISOR.

3.13.1.2 Securely attach a report with the following information in a waterproof envelope; command, manufacturer's model number, manufacturer's serial number, date of rebuild and date of delivery, size of piston and liner installed by cylinder and one each hard copy of required reports 3.10.1, 3.11.1 and 3.12.1.1.

3.14 Fill each engine to the full mark with new lube oil conforming to Mil-L-9000, symbol 9250.

3.15 Install new each cooling water, fuel and hydraulic hose using 2.2 and 2.9 for guidance.

3.16 Accomplish the requirements of 009-32 of 2.1 for each engine.

3.17 Deliver each engine disassembled in 3.2 via the SUPERVISOR.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

4. NOTES:

4.1 None

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.

SHIP:	<u>ASSAULT CRAFT UNIT ONE (ACU-1)</u>	ITEM NO:	<u>233-11-003</u>
COAR:	<u>28-081</u>	PCN:	<u>SSSD-0112</u>
		CMP:	<u>NONE</u>
		PLANNER:	KELLY

1. SCOPE :

1.1 Title: 3-71 Ships Service Diesel Engine; overhaul

1.2 Location of Work:

1.2.1 Not Applicable

1.3 Identification:

1.3.1 Quantity (One), Diesel Engine, Model 3-71, Detroit Diesel Corporation.

2. REFERENCES :

2.1 Standard Items

2.2 Detroit Diesel Inline Series 71 Service Manual

2.3 S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships.

2.4 SUPSHIP San Diego Reference 276; Cleaning Procedures dated 18 April 1988

2.5 GM Diesel Parts Book for Inline Series 71 Engines

2.6 T9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods

2.7 MIL-STD-2035; Non-Destructive Testing Acceptance Criteria

2.8 S9086-HB-STM-000/CH-233; NSTM, Diesel Engines

2.9 S6430-AE-TED-010, Technical Directive for Piping Devices, Flexible
Hose Assemblies

3. REQUIREMENTS :

3.1 Pick up each equipment identified in 1.3.1.

3.1.1 Remove and dispose of fluids to accomplish requirements of this

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

work item.

3.2 Disassemble each equipment identified in 1.3.1, in accordance with 2.2.

3.2.1 Submit one legible copy, in hard copy or electronic media, within 48 hours after removal of equipment of a report listing missing parts including part number, price and, availability required for a class "B" overhaul of equipment identified in 1.3.1 to the SUPERVISOR using 2.2 for guidance.

3.3 Chemically and mechanically clean each part free of contamination, using 2.4 for guidance.

3.4 Inspect each part for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.5 Measure and record sizes and clearances of each wearing part and fit area, using 2.2 for guidance.

3.6 Submit one legible copy, in hard copy or electronic media of a report, listing results of the requirements of 3.4 and 3.5 to the SUPERVISOR.

3.7 Accomplish class "B" overhaul as defined in Paragraph 042c of 2.3 for each engine identified in paragraph 1.3.1 using 2.2 for guidance.

3.7.1 Machine cut and handwork each machined, sealing, aligning, mating and gasket surface, taking precaution to ensure no excessive material is removed causing loss of critical size or alignment.

3.7.2 Chase and tap exposed threaded areas.

3.7.3 Repair each cylinder block using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.3.1 Pressure test each cylinder block at 40 PSIG, using 2.2 for guidance.

3.7.3.2 Hone each cylinder block bore using 2.2 for guidance.

3.7.3.3 Install each cylinder block end plate, fit and install new each gasket and fastener using 2.2 for guidance.

3.7.4 Repair each cylinder head using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.4.1 Pressure Test each cylinder head at 40 PSIG using 2.2 for guidance.

(I)(G) "NEW PARTS"

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.4.2 Remove existing install new each exhaust valve, spring and gasket using 2.2 and 2.5 for guidance.

3.7.4.3 Install new each threaded fastener, gasket, O-ring, oil seal, pipe plug, washer and fuel pipe.

3.7.5 Repair each crankshaft using 2.2 for guidance.

(I)(G) "MAGNETIC PARTICLE TEST "

3.7.5.1 Accomplish magnetic particle tests on each crankshaft using 2.6 for guidance. The accept or reject criteria shall be in accordance with Section 6 of 2.7.

3.7.5.2 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.1 to the SUPERVISOR.

3.7.5.3 Inspect each crankshaft for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.5.4 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.3 to the SUPERVISOR.

3.7.6 Inspect each connecting rod for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.6.1 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.6 to the SUPERVISOR.

3.7.7 Repair each blower using 2.2 for guidance.

3.7.7.1 Repair scratches, grooves, nicks, burrs and pits.

(I)(G) "BALANCE"

3.7.7.2 Accomplish the requirements of 009-15 of 2.1 for each rotating assembly.

3.7.7.3 Install new each gasket and threaded fastener.

3.7.7.4 Submit one legible copy, in hard copy or electronic media, of each final clearance reading using 2.2 for guidance to the SUPERVISOR.

3.7.8 Disassemble each lubricating oil cooler, using 2.2 for guidance.

3.7.8.1 Chemically and mechanically clean each lube oil cooler in accordance with Chapters 4, 5, and 18 of 2.4.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

(I)(G) "HYDROSTATIC TEST"

3.7.8.2 Hydrostatically test each lube oil cooler at 75 PSIG in accordance with Section 4.4 of 2.2.

3.7.8.3 Repair 10 leaks in each lube oil cooler.

3.7.9 Assemble each lube oil cooler, fit and install new fasteners, gaskets, plugs, washers and lockwashers using 2.2 for guidance.

(I)(G) "HYDROSTATIC TEST"

3.7.9.1 Hydrostatically test each lube oil cooler using clean fresh water at 75 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10 Disassemble each fresh water heat exchanger, using 2.2 for guidance.

3.7.10.1 Chemically and mechanically clean each fresh water heat exchanger in accordance with Chapters 4, 5, and 18 of 2.4.

(I)(G) "HYDROSTATIC TEST"

3.7.10.2 Hydrostatically test each fresh water heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10.3 Repair 4 each leaking tubes by soldering both ends of the tube closed.

(I)(G) "HYDROSTATIC TEST"

3.7.10.4 Hydrostatically test each freshwater heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

(I)(G) "NEW PARTS"

3.7.11 Assemble each fresh water heat exchanger, fit and install new each fastener, gasket, seal and plug, using 2.2 and 2.5 for guidance.

3.7.12 Deliver each governor to a qualified governor repair facility.

3.7.12.1 Repair, set, adjust and calibrate each governor using 2.2 for guidance.

3.7.13 Repair each fuel oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.13.1 Fit and install new each fastener, gasket, seal, spring, pin bushing and plug using 2.2 and 2.5 for guidance.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.14 Repair each lube oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.14.1 Fit and install new each gasket, seal, key, pin, washer and fastener.

3.7.15 Repair each fresh water pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.15.1 Assemble each fresh water pump, fit and install new each fastener, seal, gasket, slinger, O-ring and bearing using 2.2 and 2.5 for guidance.

(I)(G) "NEW PARTS"

3.8 Assemble each diesel engine and repaired engine component. Fit, and install new the following Original Equipment Manufacturer parts in each equipment listed in 1.3 using 2.2 and 2.5 for guidance:

TOTAL QUANTITY REQUIRED PER UNIT	NAME OF PART
One	Gasket Kit
One	Seal Crankshaft, Front
One	Slinger
One	Seal Crankshaft, Rear
4	Main Bearing Shell Set
3	Thrust Washer
3	Connect Rod Bearing
3	Shell Set
3	Piston Ring Set
3	Liner Cylinder
3	Insert Cylinder Liner
3	Camshaft Bearing
4	Thrust Washer
4	Bearing Set, Camshaft
One	Air Pressure Regulator
One	Oil Pressure Regulator

3.8.1 Fit and install new each fastener, plug, washer, lockwasher, seal, dowel, pin, key, retainer ring, spacer, spring, O-ring, clamp, shim, bushing, lube oil filter element, air filter element, and fuel oil filter element conforming to the Material List of 2.5.

3.8.1.1 Submit one legible copy, in hard copy or electronic media, of certification that each Fuel Injector Assembly meets manufacturer's calibration and performance standards to the SUPERVISOR.

(I)(G) "HYDROSTATIC TEST"

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.9 Hydrostatically test each engine fresh water system using clean fresh water at 10 PSIG using clean fresh water for a minimum of 30 minutes. Allowable leakage: None.

3.10 Accomplish crankshaft pulley end play thrust measurements using 2.2 for guidance.

3.10.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.10 to the SUPERVISOR.

3.11 Accomplish blower readings for each blower; rotor to end plate (gear end), rotor to end plate, leading edge of RH rotor to trailing edge of LH rotor, trailing edge of RH rotor to trailing edge of LH rotor and rotors to case inlet side.

3.11.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.11 to the SUPERVISOR.

3.12 Fill each engine to the full mark with new lube oil conforming Mil-L-9000, symbol 9250.

(I)(G) "DYNAMOMETER TEST"

3.13 Accomplish Dynamometer Test for each engine listed in 1.3.1 using 2.2 for guidance.

3.13.1 Perform start up and Emergency Generator Run in Schedule using 2.8 for guidance.

3.13.1.1 Submit one legible copy, in hard copy or electronic media, of a report listing results of the requirements of 3.12 and 3.12.1.1 to the SUPERVISOR.

3.13.1.2 Securely attach a report with the following information in a waterproof envelope; command, manufacturer's model number, manufacturer's serial number, date of rebuild and date of delivery, size of piston and liner installed by cylinder and one each hard copy of required reports 3.10.1, 3.11.1 and 3.12.1.1.

3.14 Fill each engine to the full mark with new lube oil conforming to Mil-L-9000, symbol 9250.

3.15 Install new each cooling water, fuel and hydraulic hose using 2.2 and 2.9 for guidance.

3.16 Accomplish the requirements of 009-32 of 2.1 for each engine.

3.17 Deliver each engine disassembled in 3.2 via the SUPERVISOR.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

4. NOTES:

4.1 None

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.

SHIP:	<u>ASSAULT CRAFT UNIT ONE (ACU-1)</u>	ITEM NO:	<u>233-11-004</u>
COAR:	<u>28-081</u>	PCN:	<u>SSSD-0111</u>
		CMP:	<u>NONE</u>
		PLANNER:	<u>KELLY</u>

1. SCOPE :

1.1 Title: 4-71 Anchor Diesel Engine; overhaul

1.2 Location of Work:

1.2.1 Not Applicable

1.3 Identification:

1.3.1 Quantity (One), Diesel Engine, Model 4-71, Detroit Diesel Corporation.

2. REFERENCES :

2.1 Standard Items

2.2 Detroit Diesel Inline Series 71 Service Manual

2.3 S9AA0-AB-GOS-010/GSO, General Specifications for Overhaul of Surface Ships.

2.4 SUPSHIP San Diego Reference 276; Cleaning Procedures dated 18 April 1988

2.5 GM Diesel Parts Book for Inline Series 71 Engines

2.6 T9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods

2.7 MIL-STD-2035; Non-Destructive Testing Acceptance Criteria

2.8 S9086-HB-STM-000/CH-233; NSTM, Diesel Engines

2.9 S6430-AE-TED-010, Technical Directive for Piping Devices, Flexible
Hose Assemblies

3. REQUIREMENTS :

3.1 Pick up each equipment identified in 1.3.1.

3.1.1 Remove and dispose of fluids to accomplish requirements of this

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

work item.

3.2 Disassemble each equipment identified in 1.3.1, in accordance with 2.2.

3.2.1 Submit one legible copy, in hard copy or electronic media, within 48 hours after removal of equipment of a report listing missing parts including part number, price and, availability required for a class "B" overhaul of equipment identified in 1.3.1 to the SUPERVISOR using 2.2 for guidance.

3.3 Chemically and mechanically clean each part free of contamination, using 2.4 for guidance.

3.4 Inspect each part for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.5 Measure and record sizes and clearances of each wearing part and fit area, using 2.2 for guidance.

3.6 Submit one legible copy, in hard copy or electronic media of a report, listing results of the requirements of 3.4 and 3.5 to the SUPERVISOR.

3.7 Accomplish class "B" overhaul as defined in Paragraph 042c of 2.3 for each engine identified in paragraph 1.3.1 using 2.2 for guidance.

3.7.1 Machine cut and handwork each machined, sealing, aligning, mating and gasket surface, taking precaution to ensure no excessive material is removed causing loss of critical size or alignment.

3.7.2 Chase and tap exposed threaded areas.

3.7.3 Repair each cylinder block using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.3.1 Pressure test each cylinder block at 40 PSIG, using 2.2 for guidance.

3.7.3.2 Hone each cylinder block bore using 2.2 for guidance.

3.7.3.3 Install each cylinder block end plate, fit and install new each gasket and fastener using 2.2 for guidance.

3.7.4 Repair each cylinder head using 2.2 for guidance.

(I)(G) "PRESSURE TEST"

3.7.4.1 Pressure Test each cylinder head at 40 PSIG using 2.2 for guidance.

(I)(G) "NEW PARTS"

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.4.2 Remove existing install new each exhaust valve, spring and gasket using 2.2 and 2.5 for guidance.

3.7.4.3 Install new each threaded fastener, gasket, O-ring, oil seal, pipe plug, washer and fuel pipe.

3.7.5 Repair each crankshaft using 2.2 for guidance.

(I)(G) "MAGNETIC PARTICLE TEST "

3.7.5.1 Accomplish magnetic particle tests on each crankshaft using 2.6 for guidance. The accept or reject criteria shall be in accordance with Section 6 of 2.7.

3.7.5.2 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.1 to the SUPERVISOR.

3.7.5.3 Inspect each crankshaft for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.5.4 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.5.3 to the SUPERVISOR.

3.7.6 Inspect each connecting rod for wear and defects, using 2.2 as guidance for accept or reject criteria.

3.7.6.1 Submit one legible copy, in hard copy or electronic media of a report listing results of the requirements of 3.7.6 to the SUPERVISOR.

3.7.7 Repair each blower using 2.2 for guidance.

3.7.7.1 Repair scratches, grooves, nicks, burrs and pits.

(I)(G) "BALANCE"

3.7.7.2 Accomplish the requirements of 009-15 of 2.1 for each rotating assembly.

3.7.7.3 Install new each gasket and threaded fastener.

3.7.7.4 Submit one legible copy, in hard copy or electronic media, of each final clearance reading using 2.2 for guidance to the SUPERVISOR.

3.7.8 Disassemble each lubricating oil cooler, using 2.2 for guidance.

3.7.8.1 Chemically and mechanically clean each lube oil cooler in accordance with Chapters 4, 5, and 18 of 2.4.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

(I)(G) "HYDROSTATIC TEST"

3.7.8.2 Hydrostatically test each lube oil cooler at 75 PSIG in accordance with Section 4.4 of 2.2.

3.7.8.3 Repair 10 leaks in each lube oil cooler.

3.7.9 Assemble each lube oil cooler, fit and install new fasteners, gaskets, plugs, washers and lockwashers using 2.2 for guidance.

(I)(G) "HYDROSTATIC TEST"

3.7.9.1 Hydrostatically test each lube oil cooler using clean fresh water at 75 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10 Disassemble each fresh water heat exchanger, using 2.2 for guidance.

3.7.10.1 Chemically and mechanically clean each fresh water heat exchanger in accordance with Chapters 4, 5, and 18 of 2.4.

(I)(G) "HYDROSTATIC TEST"

3.7.10.2 Hydrostatically test each fresh water heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

3.7.10.3 Repair 4 each leaking tubes by soldering both ends of the tube closed.

(I)(G) "HYDROSTATIC TEST"

3.7.10.4 Hydrostatically test each freshwater heat exchanger using clean fresh water at 5 PSIG for a minimum of 10 minutes. Allowable leakage: None.

(I)(G) "NEW PARTS"

3.7.11 Assemble each fresh water heat exchanger, fit and install new each fastener, gasket, seal and plug, using 2.2 and 2.5 for guidance.

3.7.12 Deliver each governor to a qualified governor repair facility.

3.7.12.1 Repair, set, adjust and calibrate each governor using 2.2 for guidance.

3.7.13 Repair each fuel oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.13.1 Fit and install new each fastener, gasket, seal, spring, pin bushing and plug using 2.2 and 2.5 for guidance.

SHIP: ASSAULT CRAFT UNIT ONE (ACU-1)

3.7.14 Repair each lube oil pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.14.1 Fit and install new each gasket, seal, key, pin, washer and fastener.

3.7.15 Repair each fresh water pump using 2.2 for guidance.

(I)(G) "NEW PARTS"

3.7.15.1 Assemble each fresh water pump, fit and install new each fastener, seal, gasket, slinger, O-ring and bearing using 2.2 and 2.5 for guidance.

(I)(G) "NEW PARTS"

3.8 Assemble each diesel engine and repaired engine component. Fit, and install new the following Original Equipment Manufacturer parts in each equipment listed in 1.3 using 2.2 and 2.5 for guidance:

TOTAL QUANTITY REQUIRED PER UNIT	NAME OF PART
One	Gasket Kit
One	Seal Crankshaft, Front
One	Slinger
One	Seal Crankshaft, Rear
5	Main Bearing Shell Set
4	Thrust Washer
4	Connect Rod Bearing
4	Shell Set
4	Piston Ring Set
4	Liner Cylinder
4	Insert Cylinder Liner
4	Camshaft Bearing
4	Thrust Washer
6	Bearing Set, Camshaft
One	Air Pressure Regulator
One	Oil Pressure Regulator

3.8.1 Fit and install new each fastener, plug, washer, lockwasher, seal, dowel, pin, key, retainer ring, spacer, spring, O-ring, clamp, shim, bushing, lube oil filter element, air filter element, and fuel oil filter element conforming to the Material List of 2.5.

3.8.1.1 Submit one legible copy, in hard copy or electronic media, of certification that each Fuel Injector Assembly meets manufacturer's calibration and performance standards to the SUPERVISOR.

(I)(G) "HYDROSTATIC TEST"

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3.9 Hydrostatically test each engine fresh water system using clean fresh water at 10 PSIG using clean fresh water for a minimum of 30 minutes. Allowable leakage: None.

3.10 Accomplish crankshaft pulley end play thrust measurements using 2.2 for guidance.

3.10.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.10 to the SUPERVISOR.

3.11 Accomplish blower readings for each blower; rotor to end plate (gear end), rotor to end plate, leading edge of RH rotor to trailing edge of LH rotor, trailing edge of RH rotor to trailing edge of LH rotor and rotors to case inlet side.

3.11.1 Submit one legible copy, in hard copy or electronic media, of the results of 3.11 to the SUPERVISOR.

3.12 Fill each engine to the full mark with new lube oil conforming Mil-L-9000, symbol 9250.

(I)(G) "DYNAMOMETER TEST"

3.13 Accomplish Dynamometer Test for each engine listed in 1.3.1 using 2.2 for guidance.

3.13.1 Perform start up and Emergency Generator Run in Schedule using 2.8 for guidance.

3.13.1.1 Submit one legible copy, in hard copy or electronic media, of a report listing results of the requirements of 3.12 and 3.12.1.1 to the SUPERVISOR.

3.13.1.2 Securely attach a report with the following information in a waterproof envelope; command, manufacturer's model number, manufacturer's serial number, date of rebuild and date of delivery, size of piston and liner installed by cylinder and one each hard copy of required reports 3.10.1, 3.11.1 and 3.12.1.1.

3.14 Fill each engine to the full mark with new lube oil conforming to Mil-L-9000, symbol 9250.

3.15 Install new each cooling water, fuel and hydraulic hose using 2.2 and 2.9 for guidance.

3.16 Accomplish the requirements of 009-32 of 2.1 for each engine.

3.17 Deliver each engine disassembled in 3.2 via the SUPERVISOR.

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4. NOTES:

4.1 None

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.